REMARKS

Independent Claim 1 is the sole claim presented for consideration.

Claim 1 has been amended to further distinguish Applicant's invention from the cited art. Support for the amendments to Claim 1 can be found, for example, on page 7, line 24, *et. seq.*, of the specification.

Claim 1 stands rejected under 35 U.S.C. §103 as allegedly being obvious over Fan '693 in view of Yu '088. This rejection is respectfully traversed.

Claim 1 of Applicant's invention relates to a geometric model conversion method of converting a three-dimensional CAD geometric analytical model of a thin-walled structure into a two-dimensional analytical model. The method includes a step of generating a plurality of tetrahedral solid elements, each of which has a shape of a triangular pyramid having an apex and a base and a single-layered structure in a plate thickness direction, by dividing an input three-dimensional CAD geometric analytical model which has a thin-walled structure such that the base of the triangular pyramid is placed on one surface of the thin-walled structure and the apex is placed on the other surface of the thin-walled structure opposing to the one surface, and generating intermediate nodes of sides that extend in a direction of plate thickness in each tetrahedral solid element having a shape of the triangular pyramid. The intermediate nodes are connected to generate a plurality of triangular shell elements as the two-dimensional analytical model, and an injection molding analysis is executed with respect to each shell element of the two-dimensional analytical model generated in the connecting step and the results of the injection molding analysis are outputted.

In accordance with Applicant's claimed invention, an efficient and high performance geometric model conversion method can be provided. More particularly, Claim1 sets forth a method for generating a two-dimensional analytical model from a three-dimensional solid model of a thin-walled structure, and does so in an efficient and relatively simple way.

The primary citation to Fan provides a method for generating a two-dimensional model. Fan's structural analysis method, however, is different and more complicated than Applicant's claimed conversion method. In Fan's method, a half thickness (0.5t) is ascribed to shell elements, requiring two plates each of a half thickness to be matched and bonded (or connected). This conversion method if significantly different--and more complex--than Applicant's claimed conversion method of generating a two-dimensional analytical model by generating a plurality of triangular pyramids in a plate thickness direction and forming a plurality of triangular shell elements by connecting intermediate nodes of the triangular pyramids in the plate thickness direction.

The secondary citation to Yu relates to a modelling method with three-dimensional objects and is cited for its teaching of a single layer structure in the plate thickness direction. It is submitted, however, that the deficiencies in Fan as discussed above are not compensate for by Yu.

Accordingly, it is submitted that, *arguendo*, the combination of Fan and Yu still fails to teach or suggest Applicant's claimed invention. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

Thus, it is submitted that Applicant's invention as set forth in independent Claim 1 is patentable over the cited art.

Due consideration and prompt passage to issue are respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

/Scott D. Malpede/

Scott D. Malpede
Attorney for Applicant
Registration No. 32,533

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

SDM\rnm

FCHS_WS 2800517v1